PERMIT TO OPERATE WITHOUT PERMIT TO CONSTRUCT

SUMMARY

The objective of this permit action is to issue permits to operate for modifications already made to Tanks No. T-1014 (D275) and T-1015 (D276), including the addition of carbon adsorbers and knockout pots and removal of vent demisters.

COMPANY INFORMATION

Company Name:	Paramount Petroleum Corporation, Facility ID No. 800183
Mailing Address:	14700 Downey Ave, Paramount, CA 90723
Equipment Location:	14700 Downey Ave, Paramount, CA 90723
Contact Person:	Kathryn Gleeson, (562) 748-4613

EQUIPMENT DESCRIPTION

Table 1 shows the proposed Section D permit descriptions for Tank No.'s T-1014 (D275) and T-1015 (D276). Additions to the descriptions are noted in underlines and deletions are noted in ~~strikeouts~~.

Table 1. Permit Equipment Description
SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

Equipment	ID No.	Conn To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 10 : STORAGE TANKS					
System 1 : FIXED ROOF TANKS					S13.4, S31.4
STORAGE TANK, NO. T-1014, ASPHALT, WITH HEATING COILS, A 10 HP MIXER ~~AND A VENT DEMISTER, WITH MIST ELIMINATOR~~, 1000 BBL A/N: ~~419601~~ 442927	D275	Cxxx			C6.7, ~~D12.2,~~ D12.8, D323.2, ~~E448.1,~~ K67.2
CARBON ADSORBER, 180 LBS, WITH A KNOCKOUT POT A/N 442927	Cxxx	D275			D90.5, E153.x
STORAGE TANK, NO. T-1015, ASPHALT, WITH HEATING COILS, A 5 HP MIXER ~~AND A VENT DEMISTER, WITH MIST ELIMINATOR~~, 1000 BBL A/N: ~~419602~~ 442930	D276	Cyyy			C6.7, ~~D12.2,~~ D12.8, D323.2, ~~E448.1,~~ K67.2
CARBON ADSORBER, 180 LBS, WITH A KNOCKOUT POT A/N 442930	Cyyy	D276			D90.5, E153.x

COMPLIANCE RECORD REVIEW

A query of the AQMD Compliance Database for the past two years (4/1/11 to 4/18/13) identified 10 Notice of Violations (NOVs) and 5 Notices to Comply issued to the Paramount Petroleum Corporation (Facility ID 800183). The compliance database indicates that the facility is currently in compliance with applicable rules and regulations.

FEE EVALUATION

The BCAT for Tanks T-1014 (D275) and T-1015 (D276) is 214910 (Storage Tank Asphalt <=50,000 gallons), Schedule B. The Schedule B modification fee is $2181.14, including a 50% penalty for failing to obtain a permit to construct. Fees of $2312.01 were paid for each application when it was submitted, so $130.87 will be refunded to the facility for each application. No additional fees are required for this permit application..

BACKGROUND/HISTORY

Tanks T-1014 (D275) and T-1015 (D276) are heated asphalt storage tanks. Tanks T-1014 (D275) and T-1015 (D276) each have a 1,000 bbl (42,000 gallon) capacity. Both tanks are currently equipped with a knockout pot and a carbon drum for odor control, which were not previously permitted. In addition, the tanks no longer have demisters, as these were removed when the carbon canisters were installed. The carbon canisters are a more effective control device for both odors and VOCs.

The permitting histories for each tank are provided in **Table 2** and **Table 3**. Both tanks were in operation prior to 1976, when they were first permitted due to a change in the exemptions listed in Rule 219. A change of operator took place in 1984, and the only other previous permit action was an administrative change to replace Condition C6.7 with Condition E448.1 to allow operation above 350°F if Rule 401 requirements are met. At that time, the tanks were not restricted to a max temperature of 350°F. However, as part of this permitting action to include a carbon canister and knockout pot as part of these tank permit units, the facility agreed to accept a 350°F maximum temperature limit for emissions estimating purposes. Thus, Condition C6.7 will be replacing Condition E448.1 for these tanks.

The facility has indicated that these storage tanks are now equipped with a knockout pot and carbon canister for odor control. This control equipment was installed without a permit to construct. The tanks no longer have demisters, as this equipment was removed when the carbon canisters were installed. Applications A/N 496751 and 496860 were submitted for the removal of the demisters, but they were cancelled and consolidated the applications that are the subject of this permit action. These applications are being processed as modifications performed without a permit to construct. The objective of this permit action is to update the equipment description to reflect the tank as it is currently configured.

Conditions D90.5 and E153.x are being imposed on the new carbon canisters to ensure that they are routinely monitored and replaced as needed.

Table 2. Permitting History for Tank No. T-1014 (D275)

A/N {Permit #}	Date permit issued	A/N type	A/N status	Facility ID	Description
442927		50	21	800183	Modification for changes made without a PC to add a carbon canister and knockout pot and remove demister
496751	-	63	52	800183	Administrative change to remove demister (cancelled and consolidated with 442927)
419601 {F68783}	9/30/04	63	31	800183	Administrative change to replace Condition C6.7 with Condition E448.1 to allow operation above 350°F if Rule 401 requirements are met.
104316 {M33113}	4/27/84	40	31	43489	Change of operator from Douglas Oil to Pacific Oasis/Paramount Petroleum
C05489 {P67454}	10/25/76		31	22845	Application to permit asphalt tank previously exempt from permitting

Table 3. Permitting History for Tank No. T-1015 (D276)

A/N {Permit #}	Date permit issued	A/N type	A/N status	Facility ID	Description
442930		50	21	800183	Modification for changes made without a PC to add a carbon canister and knockout pot and remove demister
496860	-	63	52	800183	Administrative change to remove demister (cancelled and consolidated with 442930)
419602 {F68784}	9/30/04	63	31	800183	Administrative change to replace Condition C6.7 with Condition E448.1 to allow operation above 350°F if Rule 401 requirements are met.
104317 {M33114}	4/27/84	40	31	43489	Change of operator from Douglas Oil to Pacific Oasis/Paramount Petroleum
C05490 {P67455}	10/25/76		31	22845	Application to permit asphalt tank previously exempt from permitting

EMISSIONS

Modifications to add a carbon canister (and knockout pot) for emission control and remove a demister are not expected to cause any increase in emissions. Baseline emissions were not available in the previous application files, so emissions were calculated as part of this permit action. The reduction in VOC emissions due to the demisters has been estimated at 60-80%. Carbon canisters have a VOC removal efficiency of 95%. Thus, the replacement of demisters with carbon canisters does not cause or allow any increase in emissions.

Emissions for both tanks (which have the same capacity and asphalt service and are assumed to be identical) were calculated using the EPA TANKS 4.0.9d program. This program does not contain asphalt in its chemical database, so assumptions were made regarding the chemical properties of asphalt to represent a worst-case emissions scenario, resulting in a conservative estimate of emissions.

The physical properties of asphalt used in the TANKS program were taken from Section 4.4.5 – Storage Tank Emissions of the February 2004 document "Emission Factor Documentation for AP-42 Section 11.1 Hot Mix Asphalt Plants". The report describes the derivation of Antoine's constants based on averaging those for docosane and tricosane. The Antoine's constants used are: A=75350.06; B=9.00346. The

vapor molecular weight of asphalt is assumed to be 105 lb/lb-mol. A liquid molecular weight of 1000 lb/lb-mol and a liquid density of 9.22 lb/gal were also used in emission calculations. Calculations were performed at the maximum permitted temperature of 350°F (See Condition C6.7).

Using these parameters in the EPA TANKS 4.0.9d program, VOC emissions were estimated at 342.65 lb/yr working losses and 0.0000 lb/yr standing losses; a total of 342.65 lb/yr (0.94 lb/day). (See Attachment A). The TANKS program estimate of vapor pressure is 0.0347 psia at 350°F.

These tanks are being monitored to ensure that the concentration at the outlet of the carbon canister (at standard temperature and pressure) is less than 100 ppm VOC (measured as hexane). Assuming this is the worst case scenario for emissions, and using the ideal gas equation, the equivalent ambient vapor pressure, P is equal to

$$P = n/V \times R \times T$$

Where:

(at 100 ppm) $n/V = 100\ ft^3/1{,}000{,}000\ ft^3 \times 1\ lbmol/386.86\ ft^3 = 1\ lbmol/3{,}868{,}600\ ft^3$

$R = 10.73\ psi\ ft^3/(lbmol\ °R)$

$T = 68°F + 459.67 = 527.67\ °R$

Thus, $P = [1\ lbmol / 3{,}868{,}600\ ft^3] \times 10.73\ psi\ ft^3/(lbmol\ °R) \times 527.67\ °R = 0.00147\ psia$

So a vapor pressure of 0.00147 psia is equivalent to a VOC concentration (measured as hexane per Condition D90.5) at the exit of a carbon canister of 100 ppm. Using the molecular weight of hexane, C_6H_{14} =86.17 lb/lbmol, a liquid density of 5.527 lb/gal at 60°F and a constant vapor pressure of 0.00147 psia, the TANKS program was used to estimate emissions (see Attachment B) which resulted in emissions of 11.9 lb/yr working loss (breathing loss was estimated at 0). This is equivalent to 0.033 lb/day and 0.0013 lb/hr, similar to that calculated using TANKS for Antoine-estimated Asphalt.

For the purpose of determining the carbon life, the uncontrolled emissions are all captured.

$$D\ (days) = \frac{\text{carbon weight (lb carbon)} \times \text{carbon absorptivity (lb VOC/lb carbon)}}{\text{VOC emission rate (lb/day)}}$$

$$D\ (days) = \frac{180\ lb\ carbon \times 0.2\ lb\ VOC/lb\ carbon}{0.94\ lb/day} = 38\ days\ carbon\ lifetime$$

At the proposed operating conditions, the carbon canister would be expected to have capacity sufficient for 38 days. Condition D90.5 requires monitoring of the carbon canister on a weekly basis.

These emission calculations are the same for each tank [T-1014 (D275) and T-1015 (D276)].

RULES EVALUATION

PART 1: SCAQMD REGULATIONS

Rule 212 Standards for Approving and Issuing Public Notice (Amended 11/14/97)

Rule 212 requires public notice for any new or modified permit unit, RECLAIM source or Title V equipment that increases emissions of toxic air contaminants and increases health risk as specified in 212(c)(1) - (c)(3). The proposed new equipment will not be located within 1000 feet of a school, so public notice is not required per 212(c)(1).

This project does not include an emission increase that exceeds any of the daily maximums in Rule 212(g), so the criteria in 212(c)(2) are not met. Since the project does not include an emission increase, it also does not result in MICR over the thresholds in Rule 212(c)(3)(A) and is not likely to pose a potential risk of nuisance per 212(c)(3)(B). The project does not require notice per Rule 212(c)(1), (c)(2) or (c)(3). No Rule 212 public notice is required.

Rule 401 Visible Emissions (Amended 11/09/01)

Operation of these permit units is not expected to result in visible emissions if the operating temperatures remain below 350°F, as required by Condition C6.7. Condition D323.3 requires investigation of any observed visible emissions and implementation of mitigation measures if visible emissions are identified. These tanks are currently in compliance with this rule, and are expected to continue to comply with the requirements of this rule.

Rule 402 Nuisance (Adopted 05/07/76)

Operation of these permit units is not expected to result in a public nuisance. The storage tanks are each equipped with a carbon canister for odor control. Condition D90.5 requires weekly monitoring of the outlet of each carbon canister, and Condition E153.x requires that each carbon canister be replaced within 24 hours whenever breakthrough (>100 ppm hydrocarbons) occurs. The tanks are currently in compliance with this rule, and are expected to continue to comply with the requirements of this rule.

Rule 463 Organic Liquid Storage (Amended 05/06/05)

Tanks No. T-1014 (D275) and T-1015 (D276) each have a capacity of 1000 bbl (42,000 gallons). These capacities are above the threshold for Rule 463 applicability, since 463(a) states that "This rule applies to any above-ground stationary tank with a capacity of 75,000 liters (19,815 gallons) or greater used for the storage of organic liquids…" However, the tank roof requirements in Rule 463(c) apply to tanks storing organic liquids with a true vapor pressure of 0.5 psia or greater under actual storage conditions. These heated tanks store asphalt, which is estimated (using TANKS) to have a vapor pressure of 0.0347 psia at 350°F.

Rule 463 (d)(6) states that "Organic liquids listed on the addendum to this rule shall be deemed to be in compliance with the appropriate vapor pressure limits for the tank in which it is stored provided the actual storage temperature does not exceed the corresponding maximum temperature listed." The addendum specifies that for 200-300 penetration asphalt, the 0.5 psia limit is met as long as the storage temperature does not exceed 360°F. Condition C6.7 requires that these tanks not be used to store materials at a temperature above 350°F. Note that the vapor pressure was estimated to be only 0.0347 at 350°F, significantly below the Rule 463 limit. Condition K67.2 requires that records of throughput and vapor pressure be maintained for the contents of these tanks. No other Rule 463 requirements apply to these fixed-roof tanks. The facility is currently in compliance with this rule and is expected to continue to comply with this rule.

Rule 1149 Storage Tank Cleaning and Degassing (Amended 05/02/08)

Table 1 of Rule 1149 specifies that tanks with a capacity between 500 and 26,420 gallons, such as

Tanks T-1014 (D275) and T-1015 (D276), are required to control emissions if the vapor pressure is greater than or equal to 2.6 psia. The vapor pressure of the asphalt stored in Tanks T-1014 (D275) and T-1015 (D276) is less than 2.6 psia (estimated via TANKS to be 0.0347 psia at 350°F), so the control requirements of Rule 1149 do not apply to these tanks.

Rule 1178 Further Reductions of VOC Emissions From Storage Tanks at Petroleum Facilities (Amended 04/07/06)

Tanks T-1014 (D275) and T-1015 (D276) are not subject to Rule 1178 requirements because although their 42,000 gallon capacities are above the Rule 1178 threshold of 19,815 gallons for organic liquid storage [1178(b)], they are used to store asphalt, which has a true vapor pressure less than 0.1 psia under actual storage conditions (estimated via TANKS to be 0.0347 psia at 350°F). Condition K67.2 requires that records of throughput and vapor pressure be maintained for the contents of these tanks. No other Rule 1178 requirements apply to these tanks. The facility is currently in compliance with this rule and is expected to continue to comply with this rule.

Reg XIII New Source Review (Amended 12/06/02)

Rule 1303 Requirements (Amended 12/6/02)

New Source Review requirements apply to new, modified or relocated sources. Tanks T-1014 (D275) and T-1015 (D276) are existing tanks that has previously been modified (without a permit) to install emission control equipment for VOC. New Source Review requirements include an evaluation of the need for BACT *[1303(a)]*, offsets *[1303(b)(2)]*, and modeling *[1303(b)(1)]*, based on estimated emissions. In addition, the facility must comply with all applicable rules and regulations of the District before a new permit can be issued *[1303(b)(4)]*, as well as demonstrate statewide compliance *[1303(b)(5)(B)]*.

Rule 1306 Emission Calculations (Amended 12/06/02) The emissions calculations for determining BACT applicability for modifications are described in Rule 1306(b) and are calculated on a pound per day basis for determination of BACT[1306(d)(1)]. BACT applicability may be based on the maximum rated capacity per 1306(b)(1). For Tanks T-1014 (D275) and T-1015 (D276), emissions are based on a maximum tank throughput of 365 turnovers per year. This is a limiting case beyond what is anticipated or logistically possible for this tank and facility configuration.

Working losses originate from vapor displacement during tank filling. Using a maximum throughput of 365 turnovers per year results in calculated monthly working loss emissions of 342.65 lb/yr (uncontrolled). The use of the carbon canister reduces these emissions. The 100 ppmv limit at the exit of the carbon canister, monitored weekly, effectively limits the throughput and thus establishes a limit on emissions from the tank.

This modification to install a carbon canister will not cause or allow an increase in emissions (and will reduce emissions), so BACT is not required.

Offsets are not required because these permit actions will not increase emissions.

Appendix A of Rule 1303 states that modeling is not required for emissions of VOC.

NSR requirements also include the compliance of the facility with all applicable rules and regulations [1303(b)(4)]. Sensitive Zone requirements [1303(b)(3)] do not apply since offset

credits are not required for these applications, and the Major Polluting Facilities requirements [1303(b)(5)] apply only to new major facilities or major modifications at existing facilities.

The facility is expected to comply with NSR requirements for BACT, modeling and offset requirements, as well as other applicable NSR requirements.

Rule 1325 Federal PM2.5 New Source Review Program (Adopted 06/03/11)

Rule 1325 defines a major modification as a physical change that would result in a significant emission increase and a significant net emissions increase of a regulated NSR pollutant from a major polluting facility [Rule 1325(4)(A)]. A significant increase is defined in 1325(b)(13) as an increase equal to or greater than 40 tons/yr nitrogen oxides; 40 tons/yr sulfur dioxide, or 10 tons/yr $PM_{2.5}$. The modifications of Tanks T-1014 (D275) and T-1015 (D276) will not result in a significant emission increase, or a significant net emissions increase. Thus, these permit actions are not major modifications, and the requirements of Rule 1325 do not apply [Rule 1325(a)].

Reg XIV Toxics and Other Non-Criteria Pollutants

Rule 1401: New Source Review of Toxic Air Contaminants (Amended 03/04/05)

Rule 1401 applies to new, modified or relocated permit units that emit Toxic Air Contaminants (TAC). The modification of Tanks T-1014 (D275) and T-1015 (D276) and their associated carbon canister control devices will not cause any increase in emissions of TACs.

Reg XVII Prevention of Significant Deterioration

Rule 1701: General (Amended 08/13/99)

Prevention of Significant Deterioration (PSD) requirements apply to new sources with an increase in PTE of 100 or 250 tons/yr of attainment air contaminants, or existing sources with a significant emission increase, or any net emission increase at a source located within 10 km of a Class I area. The proposed modifications at an existing major source will not increase PTE greater than 100 tons/yr. The facility is not located within 10 km of a Class I area. Thus, the requirements of this rule do not apply to this proposed permit action.

Rule 1714: Prevention of Significant Deterioration for Greenhouse Gases (Adopted 11/05/10)

The requirements of Rule 1714 apply to preconstruction reviews for greenhouse gases. This rule incorporates by reference several section of 40CFR Part 52.21. This rule requires that a PSD permit be obtained prior to beginning construction of a new stationary source or a major modification to an existing major source. An emission increase of greenhouse gas (GHG), as defined in §52.21(b)(49)(v), is both a significant emissions increase and a significant net emissions increase. Since the modifications of these tanks will not result in a significant emissions increase, these projects are not subject to PSD requirements for GHG.

Reg XXX Title V Permits

Rule 3000 General (Amended 11/05/10)

Paramount was issued an initial Title V operating permit on 2/27/09. This application is classified as a minor permit revision as defined in 3000(b)(15).

Rule 3003 Applications (Amended 11/05/10)

Per 3003(j)(1)(A), minor permit revisions are required to be submitted to the EPA for review.

Rule 3006 Public Participation (Amended 11/05/10)

Per Rule 3006(b), minor permit revisions are exempt from the public participation requirements of this rule. No requirements apply.

PART II: STATE REGULATIONS

CEQA California Environmental Quality Act (Amended 01/01/05)

This project does not trigger CEQA and is exempt from further CEQA action since it does not have the potential to generate significant adverse environmental impacts. In Form 400-CEQA, the facility did not identify any impacts that may trigger CEQA. Thus, the application is exempt from further CEQA action.

PART III: FEDERAL REGULATIONS

40CFR60 Subpart UU Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture (Amended 10/17/00)

Subpart UU includes standards for particulate matter for asphalt storage tanks. Tanks T-1014 (D275) and T-1015 (D276) are not allowed to vent gases to the atmosphere with opacity greater than 0 percent. Opacity is monitored per Condition D323.2. The tanks are currently in compliance with this regulation and are expected to continue to comply with this regulation.

40CFR60 Subpart K Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after June 11, 1973, and prior to May 19, 1978

Storage Tanks T-1014 (D275) and T-1015 (D276) are exempt from Subpart K requirements because they have not been constructed, reconstructed or modified since 1973. No requirements of this regulation apply.

RECOMMENDATIONS

Based on the above evaluation, it is recommended that Permits to Operate be issued with the following conditions.

CONDITIONS

SYSTEM CONDITIONS

S13.4 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	463

[**RULE 463, 5-6-2005**]

[Systems subject to this condition : Process 10, System 1]

S31.4 The following BACT requirements shall apply to VOC service fugitive components associated with the devices that are covered by application number(s) 486518 (Diesel Tank Farm Filter):

All open-ended lines shall be equipped with cap, blind flange, plug, or a second valve.

All pressure relief valves shall be connected to a closed vent system.

All new light liquid pumps shall utilize double seals.

All compressors shall be equipped with a seal system with a higher pressure barrier fluid.

All new valves in VOC service, except those specifically exempted by Rule 1173 and those in heavy liquid service as defined in Rule 1173, shall be bellows seal valves, except as approved by the District, in the following applications: heavy liquid service, control valve, instrument piping/tubing, applications requiring torsional valve stem motion, applications where valve failure could pose safety hazard, retrofits/special applications with space limitations, and valves not commercially available.

All new valves and major components in VOC service as defined by Rule 1173, except those specifically exempted by Rule 1173 and those in heavy liquid service as defined in Rule 1173, shall be distinctly identified from other components through their tag numbers (e.g., numbers ending in the letter "N"), and shall be noted in the records.

All new components in VOC service as defined in Rule 1173, except valves and flanges, shall be inspected quarterly using EPA Reference Method 21. All new valves and flanges in VOC service, except those specifically exempted by Rule 1173, shall be inspected monthly using EPA Reference Method 21.

If 98.0 percent or greater of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 100 ppmv for two consecutive months, then the operator may change to a quarterly inspection program with the approval of the District.

The operator shall revert from quarterly to monthly inspection program if less than 98.0 percent of the new (non-bellows seal) valves and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate of less than 100 ppmv.

All components in VOC service except for pumps, compressors, and drains, a leak greater than 100 ppm but less than 1,000 ppm measured as methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection. Components shall be defined as any valve, fitting, pressure relief device, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173. A leak greater than 1,000 ppm shall be repaired according to Rule 1173.

All pumps, compressors, and drains, a leak greater than 500 ppm but less than 1,000 ppm measured as methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection. A leak greater than 1,000 ppm shall be repaired according to Rule 1173.

The operator shall keep records of the monthly inspection (quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District. Records shall be kept and maintained for at least five years, and shall be made available to the Executive Officer or ~~f~~ his authorized representative upon request.

[**RULE 1303(a)(1)-BACT, 5-10-1996;** RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996;** RULE 1303(b)(2)-Offset, 12-6-2002]

[Systems subject to this condition : Process 10, System 1

DEVICE CONDITIONS

C6.7 The operator shall use this equipment in such a manner that the temperature being monitored, as indicated below, does not exceed 350 Deg F.

To comply with this condition, the operator shall install and maintain a(n) temperature reading device to accurately indicate the temperature of the asphalt stored in or pumped into the tank.

[**RULE 1301, 12-7-1995**]

[Devices subject to this condition : D92, D285, D275, D276]

D12.2 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the filter.

The operator shall record the parameter being monitored once every 7 days.

The monitoring and recording frequency shall increase to at least once every 8 hours whenever the static differential pressure reaches 20 inches water column or greater. The operator shall clean or replace the filter when 3 consecutive readings of 20 inches water column or greater are recorded.

The operator shall maintain the differential pressure gauges in good working condition.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984**]

[Devices subject to this condition : ~~D275, D276,~~ C308, C310, D328]

Note: D275 and D276 are being removed from this condition because D275 and D276 are storage tanks that do not have filters.

D12.8 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature of the asphalt stored in or pumped into this tank.

The operator shall record the parameter being monitored at least once per 12 hour shift.

[**RULE 1301, 12-7-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997**]

[Devices subject to this condition : D267, D268, D269, D271, D275, D276, D278, D279, D280, D281, D282, D283, D284, D286, D292, D294, D295, D296, D297, D298, D299, D300, D301, D302, D304, D323]

D90.5 The operator shall periodically monitor the concentration of VOC at the outlet of each carbon adsorber according to the following specifications:

The operator shall use a flame ionization detector (FID) or a District approved organic vapor analyzer (OVA) calibrated in ppmv of hexane to monitor the parameter.

The operator shall monitor the VOC concentrations at least once a week. If a tank filling is scheduled during a week, the VOC measurements shall be taken during tank filling. If no tank filling is being conducted during a week, the VOC measurements may be taken at any time.

[**RULE 1301, 12-7-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997**]

[Devices subject to this condition : Cxxx, Cyyy, C762, C764, C765, C766, C767, C768, C772, C774]

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emissions (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emission and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

1). Take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or

2). Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three business days and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

1). Stack or emission point identification;

2). Description of any corrective actions taken to abate visible emissions;

3). Date and time visible emission was abated; and

4). All visible emission observation records by operator or a certified smoke reader.

[**RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984**]

[Devices subject to this condition : D80, D85, D87, D89, D179, D181, D183, D185, D187, D189, D192, D196, D200, D206, D273, D274, D275, D276, D277, D285, D287, D288, D289, D290, D291, D293, D294, D295, D296, D297, D298, D301, D302, D303, D304, D307, D309, D311, D312, D323, D328, D527, D528, D570, D579]

E153.x The operator shall change over the spent carbon with fresh activated carbon, within 24 hours, in the adsorber whenever breakthrough occurs.

For the purpose of this condition, breakthrough occurs when the hydrocarbon monitor reading indicates a concentration of 100 ppmv at the outlet of the carbon adsorber.

Hydrocarbon monitoring shall be conducted in accordance with Condition D90.5.

[**RULE 1303(b)(2)-Offset, 5-10**-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 402, 5-7-1976]

[Devices subject to this condition : Cxxx, Cyyy]

E448.1 The operator shall comply with the following requirements:

Asphalt stored in or pumped into this tank shall not exceed 350 degrees Fahrenheit or shall be handled in a manner approved by the Executive Officer that does not violate Rule 401.

[**RULE 401, 3-2-1984**; RULE 401, 11-9-2001]

[Devices subject to this condition : D267, D268, D269, D271, ~~D275, D276~~, D278, D279, D280, D281, D282, D283, D284, D286, D292, D294, D295, D296, D297, D298, D299, D300, D301, D302, D304, D305, D323]

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Throughput and vapor pressure of stored liquid.

[**RULE 1178, 4-7-2006; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 463, 5-6-2005**]

[Devices subject to this condition : D263, D264, D267, D268, D269, D270, D271, D272, D275, D276, D278, D279, D280, D281, D282, D283, D284, D286, D292, D294, D295, D296, D297, D298, D299, D300, D301, D302, D304, D305, D306, D307, D309, D311, D312, D315, D316, D318, D319, D320, D321, D322, D323, D324, D325, D326, D327, D328, D329, D330, D334, D336, D338, D339, D340, D341, D342, D343, D344, D345, D346, D347, D348, D351, D353, D354, D355, D356, D357, D378]

ATTACHMENT A: TANKS 4.0.9d Emission Calculation Results for Antoine Asphalt/Tank T1014 & T1015

TANKS 4.0.9d

Emissions Report - Detail Format

Tank Indentification and Physical Characteristics

Identification

User Identification:	T-1014 & T1015
City:	Long Beach
State:	CA
Company:	Paramount Petroleum Corp.
Type of Tank:	Vertical Fixed Roof Tank
Description:	Heated Asphalt Storage Tank

Tank Dimensions

Shell Height (ft):	16.00
Diameter (ft):	21.50
Liquid Height (ft) :	16.00
Avg. Liquid Height (ft):	16.00
Volume (gallons):	43,453.02
Turnovers:	365.00
Net Throughput(gal/yr):	15,860,352.84
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.06
Slope (ft/ft) (Cone Roof)	0.01

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d

Emissions Report - Detail Format

Liquid Contents of Storage Tank

T-1014 & T1015 - Vertical Fixed Roof Tank
Long Beach, CA

Mixture/ Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Asphalt Antoines	All	350.00	350.00	350.00	350.00	0.0347	0.0347	0.0347	105.0000			1,000.00	Option 3: A=75350.06, B=9.00346

TANKS 4.0.9d

Emissions Report - Detail Format

Detail Calculations (AP-42)

T-1014 & T1015 - Vertical Fixed Roof Tank
Long Beach, CA

Annual Emission Calcaulations	
Standing Losses (lb):	0.0000
Vapor Space Volume (cu ft):	7.2610
Vapor Density (lb/cu ft):	0.0004
Vapor Space Expansion Factor:	0.0000
Vented Vapor Saturation Factor:	1.0000
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	7.2610
Tank Diameter (ft):	21.5000
Vapor Space Outage (ft):	0.0200
Tank Shell Height (ft):	16.0000
Average Liquid Height (ft):	16.0000
Roof Outage (ft):	0.0200
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.0200
Roof Height (ft):	0.0600
Roof Slope (ft/ft):	0.0100
Shell Radius (ft):	10.7500
Vapor Density	
Vapor Density (lb/cu ft):	0.0004
Vapor Molecular Weight (lb/lb-mole):	105.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0347
Daily Avg. Liquid Surface Temp. (deg. R):	809.6700
Daily Average Ambient Temp. (deg. F):	64.3083
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	809.6700
Tank Paint Solar Absorptance (Shell):	0.5400
Tank Paint Solar Absorptance (Roof):	0.5400
Daily Total Solar Insulation Factor (Btu/sqft day):	1,571.6498
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0000
Daily Vapor Temperature Range (deg. R):	0.0000
Daily Vapor Pressure Range (psia):	0.0000
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0347
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0347
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0347
Daily Avg. Liquid Surface Temp. (deg R):	809.6700
Daily Min. Liquid Surface Temp. (deg R):	809.6700
Daily Max. Liquid Surface Temp. (deg R):	809.6700
Daily Ambient Temp. Range (deg. R):	19.8167
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	1.0000

Vapor Pressure at Daily Average Liquid:	
Surface Temperature (psia):	0.0347
Vapor Space Outage (ft):	0.0200
Working Losses (lb):	342.6542
Vapor Molecular Weight (lb/lb-mole):	105.0000
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	0.0347
Annual Net Throughput (gal/yr.):	15,860,352.8362
Annual Turnovers:	365.0000
Turnover Factor:	0.2489
Maximum Liquid Volume (gal):	43,453.0215
Maximum Liquid Height (ft):	16.0000
Tank Diameter (ft):	21.5000
Working Loss Product Factor:	1.0000
Total Losses (lb):	342.6542

TANKS 4.0.9d

Emissions Report - Detail Format

Individual Tank Emission Totals

Emissions Report for: Annual

T-1014 & T1015 - Vertical Fixed Roof Tank
Long Beach, CA

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Asphalt Antoines	342.65	0.00	342.65

Using 95% control efficiency of carbon canister

342.65 x (1.0 - 0.95) = 17.13 lb/yr = 0.047 lb/day = 0.002 lb/hr

ATTACHMENT B: TANKS 4.0.9d Emission Calculation Results for STP Hexane Equivalent/Tank T1014 & T1015

TANKS 4.0.9d

Emissions Report - Detail Format

Tank Indentification and Physical Characteristics

Identification

User Identification:	T-1014 & T1015
City:	Long Beach
State:	CA
Company:	Paramount Petroleum Corp.
Type of Tank:	Vertical Fixed Roof Tank
Description:	Heated Asphalt Storage Tank/ equivalent STP hexane calc

Tank Dimensions

Shell Height (ft):	16.00
Diameter (ft):	21.50
Liquid Height (ft) :	16.00
Avg. Liquid Height (ft):	16.00
Volume (gallons):	43,453.02
Turnovers:	365.00
Net Throughput(gal/yr):	15,860,352.84
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.06
Slope (ft/ft) (Cone Roof)	0.01

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d

Emissions Report - Detail Format

Liquid Contents of Storage Tank

T-1014 & T1015 - Vertical Fixed Roof Tank
Long Beach, CA

Mixture/ Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
*STP hexane Tk 1014 & T1015	All	72.27	62.76	81.78	66.55	0.0015	0.0015	0.0015	86.1700			86.17	Option 1: VP70 = .00147 VP80 = .00147

TANKS 4.0.9d

Emissions Report - Detail Format

Detail Calculations (AP-42)

T-1014 & T1015 - Vertical Fixed Roof Tank
Long Beach, CA

Annual Emission Calcaulations	
Standing Losses (lb):	0.0042
Vapor Space Volume (cu ft):	7.2610
Vapor Density (lb/cu ft):	0.0000
Vapor Space Expansion Factor:	0.0715
Vented Vapor Saturation Factor:	1.0000
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	7.2610
Tank Diameter (ft):	21.5000
Vapor Space Outage (ft):	0.0200
Tank Shell Height (ft):	16.0000
Average Liquid Height (ft):	16.0000
Roof Outage (ft):	0.0200
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.0200
Roof Height (ft):	0.0600
Roof Slope (ft/ft):	0.0100
Shell Radius (ft):	10.7500
Vapor Density	
Vapor Density (lb/cu ft):	0.0000
Vapor Molecular Weight (lb/lb-mole):	86.1700
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0015
Daily Avg. Liquid Surface Temp. (deg. R):	531.9374
Daily Average Ambient Temp. (deg. F):	64.3083
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	526.2183
Tank Paint Solar Absorptance (Shell):	0.5400
Tank Paint Solar Absorptance (Roof):	0.5400
Daily Total Solar Insulation Factor (Btu/sqft day):	1,571.6498
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0715
Daily Vapor Temperature Range (deg. R):	38.0313
Daily Vapor Pressure Range (psia):	0.0000
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0015
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0015
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0015
Daily Avg. Liquid Surface Temp. (deg R):	531.9374
Daily Min. Liquid Surface Temp. (deg R):	522.4296
Daily Max. Liquid Surface Temp. (deg R):	541.4452
Daily Ambient Temp. Range (deg. R):	19.8167
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	1.0000

Vapor Pressure at Daily Average Liquid:	
Surface Temperature (psia):	0.0015
Vapor Space Outage (ft):	0.0200
Working Losses (lb):	11.9039
Vapor Molecular Weight (lb/lb-mole):	86.1700
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	0.0015
Annual Net Throughput (gal/yr.):	15,860,352.8362
Annual Turnovers:	365.0000
Turnover Factor:	0.2489
Maximum Liquid Volume (gal):	43,453.0215
Maximum Liquid Height (ft):	16.0000
Tank Diameter (ft):	21.5000
Working Loss Product Factor:	1.0000
Total Losses (lb):	11.9081

TANKS 4.0.9d

Emissions Report - Detail Format

Individual Tank Emission Totals

Emissions Report for: Annual

T-1014 & T1015 - Vertical Fixed Roof Tank
Long Beach, CA

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
*STP hexane Tk 1014 & T1015	11.90	0.00	11.91